CLAIMS

1. A tire comprising at least a first and a second bead radially extending to at least a first and a second sidewall, respectively, and said sidewalls joined to a tread; said first bead having a seat the generatrix of which has its axially inner end on a circle of diameter greater than the diameter of the circle on which is located the axially outer end, and a carcass reinforcement formed of at least one carcass ply and anchored in said first bead to at least one annular bead anchoring element, and when said tire is mounted on its operating rim and inflated to its recommended pressure, the meridian profile of said carcass reinforcement has a tangent to the point of tangency of said meridian profile with said anchoring element of said first bead that forms relative to the axis of rotation an angle open towards the outside at most equal to 70°, and characterized in that said first sidewall further comprises:

- an inextensible additional sidewall ring located axially to the inside of an axially outermost carcass ply, and
- a profiled rubber mix element extending radially between said annular bead anchoring element and said additional sidewall ring, and located axially to the inside of said axially outermost carcass ply,

2. The tire according to Claim 1, wherein said additional sidewall ring is located radially at a distance H_2, measured form the base of said bead, at most equal to two-thirds of a height H of the tire mounted on the rim.

3. The tire according to Claim 1, wherein a straight line D joining the two centers of gravity G_2 and G_4 of the meridian sections of said anchoring bead wire and of said sidewall ring, respectively forms an angle ϕ_1 open towards the outside of at most 70° with the axial direction.

4. The tire according to Claim 1, wherein said profiled rubber element comprises at least one compound having a Shore A hardness at least equal to 65 points.

5. The tire according to Claim 4, wherein said carcass reinforcement ply is anchored in said bead by winding around a bead wire of quasi-circular section to form an upturn extending into a wedge-shaped profiled rubber element having a Shore A hardness greater than 65 points, and wherein the cross-section of said wedge-shaped profiled rubber element.

corresponds to a sector of a circle with an apex A radially beneath said anchoring bead wire, a radially upper side and a radially lower side extending from said apex and joined to a third side opposite said apex A, said radially upper side forming relative to the axis of rotation an angle of between 20° and 70° and said radially lower side forming with the same axis an angle of between 0° and 30°.

6. The tire according to Claim 5, wherein said upturn of said carcass reinforcement ply has a length at least equal to the total perimeter of said wedge-shaped element, and whereby said ply forms said radially outer and inner sides of the wedge-shaped element and said side opposite said apex A and the end of said ply being located axially beyond said apex A of said outer and inner sides.

7. The tire according to Claim 6, wherein said upturn of said carcass ply forms firstly said radially outer side of said wedge, then said side opposite said apex A, then finally said radially inner side of said wedge.

8. The tire according to Claim 6, wherein said upturn of said carcass ply forms firstly said radially inner side of said wedge, then said side opposite said apex A, then finally said radially outer side of said wedge.

9. The tire according to Claim 1, wherein said carcass reinforcement comprises at least two carcass plies, and a second axially inner ply is located axially to the inside of said additional sidewall ring and axially to the inside of said profiled element radially extending axially between said anchoring element and said additional ring.

10. The tire according to Claim 9 further comprising a crescent-shaped profiled rubber element posed axially to the inside of said axially inner carcass ply and having a maximum axial thickness at the level of the line of maximum axial width of said tire and further having a minimum axial thicknesses at the levels of the edges a crown reinforcement in said tread and of the carcass anchoring element, respectively.

11. The tire according to Claim 1, wherein said first bead B_E and respective first sidewall and said second bead B_I and respective second sidewall are symmetrical relative to the equatorial plane XX' of said tire.

12. The tire according to Claim 1, wherein said first bead B_E and respective first sidewall and said second bead B_I and respective second sidewall are dissymmetrical relative to the equatorial plane XX' of said tire.

13. The tire according to Claim 12, wherein said second bead B_I has a seat the generatrix of which has its axially inner end on a circle of diameter greater than the diameter of the circle on which is located its axially outer end, and a carcass reinforcement in said second sidewall formed of at least one carcass ply and anchored in said second bead to at least one annular bead anchoring element, and when said tire is mounted on its operating rim and inflated to its recommended pressure, the meridian profile of said carcass reinforcement has a constant direction of curvature and has a tangent $T_IT'_I$ to the point of tangency T_I of said meridian profile with said anchoring element of said second bead that forms relative to the axis of rotation an angle ϕ_{2I} open towards the outside and at least equal to 20°.

14. The tire according to Claim 13, wherein said angle ϕ_{2I} is greater than an angle ϕ_{2E}, formed relative to the axis of rotation by a tangent $T_ET'_E$ to the point of tangency T_E to said meridian profile with said anchoring element of said first bead B_E, and said angle ϕ_{2I} is at most equal to 90°.

15. The tire according to Claim 14, wherein said second sidewall further comprises an inextensible additional sidewall ring located axially to the inside of an axially outermost carcass ply of said carcass reinforcement in said second sidewall, a profiled rubber element located radially between an annular anchoring element of said second bead B_I and said additional ring of said second sidewall.

16. The tire according to Claim 12, wherein the second bead B_I has a seat the generatrix of which has its axially inner end on a circle of diameter less than the diameter of the circle on which is located its axially outer end, said second bead being intended to be mounted on a conventional rim seat extended axially to the outside by a rim flange.

17. The tire according to Claim 16, wherein, when said tire is mounted on its operating rim and inflated to its recommended pressure, the meridian profile of a carcass reinforcement in said second sidewall has a constant direction of curvature and has a tangent $T_IT'_I$ to the point of tangency T_I of said profile with an annular anchoring element of said second bead B_I that forms, relative to the axis of rotation, an angle ϕ_{2I} open towards the outside, and said angle ϕ_{2I} is greater than an angle ϕ_{2E} formed, relative to the axis of

rotation, by a tangent $T_ET'_E$ to said meridian profile in said first sidewall at the point of tangency T_E of said meridian profile with said anchoring element of the first bead B_E.

18. The tire according to Claim 17, wherein said second sidewall further comprises an inextensible additional sidewall ring and said angle ϕ_{21} is at most equal to 90°.

19. The tire according to Claim 12, wherein said first bead B_E and second bead B_I have unequal diameters d_E and d_I, respectively.

20. The tire according to Claim 1, wherein said carcass reinforcement comprises at least one carcass ply having radial reinforcement elements.